

## REMARKS

Claims 1-67 were presented for examination, are pending and are rejected.

Reconsideration is respectfully requested.

### The Drawings

The legends of Figures 1A-3C have been amended to indicate that they are prior art as required by the Examiner. The drawings have been labeled "Replacement Sheet" as required by the Examiner.

The drawings have been amended to show features recited in the claims. Specifically, Figure 4B has been added to show the illumination of a series of areas of the sample. Figures 5C and 5D have been added so that together with Figure 5A, they show a series of two-dimensional diffraction patterns. Figure 7 has been added to show an exemplary three-dimensional diffraction pattern.

Therefore the objections should be withdrawn.

### Claim Objections

Claim 21 is objected to because the phrase "the thickness" lacks antecedent basis. The claim has been corrected. Therefore the rejection should be withdrawn.

The 35 U.S.C. § 103 Rejections

Claims 1, 3, 4, 7, 8 and 13-20 are rejected as being unpatentable over Prior Art of Present Invention in view of Smith. The rejection is respectfully traversed.

Claim 10 has been objected to but is indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 9 is intervening. Claim 1 has been amended to include the limitation: "wherein said sample or said beam is rotated around an axis, wherein  $\Theta$  is the angular position of said beam with respect to said axis, and recording a two-dimensional diffraction pattern at said series of positions". Therefore the rejection of claim 1 should be withdrawn. The rejection of claims 3, 4, 7, 8 and 13-20 should be withdrawn because they depend from claim 1.

Therefore the rejection should be withdrawn.

Claim 2 is rejected as being unpatentable over Prior Art of Present Invention in view of Smith and further in view of Bihringer et al. The rejection is respectfully traversed.

Claim 5 and 6 are rejected as being unpatentable over Prior Art of Present Invention in view of Smith and further in view of Kikuchi et al. The rejection is respectfully traversed.

Claim 9 is rejected as being unpatentable over Prior Art of Present Invention in view of Smith and further in view of Lin et al. The rejection is respectfully traversed.

Claim 12 is rejected as being unpatentable over Prior Art of Present Invention in view of Smith and further in view of Lin et al. The rejection is respectfully traversed.

Claim 66 is rejected as being unpatentable over Prior Art of Present Invention in view of Smith and further in view of Stearns et al. The rejection is respectfully traversed.

The rejection of claims 2, 5, 6, 12 and 66 should be withdrawn at least because they depend from claim 1, which has been shown to be allowable as discussed above. Claim 9 has been canceled. Therefore the rejection should be withdrawn.

#### Allowable Subject Matter

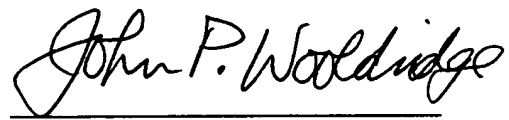
Claims 10, 21-65 and 67 are objected to as dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. As discussed above, limitations from claims 9 and 10 have been inserted into claim 1. Claims 9 and 10 have been canceled. Therefore, claims 1-8 and 11-67 should be allowable.

#### Conclusions

It is submitted that this application is in condition for allowance based on claims 1-8 and 11-67 in view of the amendments thereto and the foregoing comments.

If any impediments remain to prompt allowance of the case, please contact the undersigned at 808-875-0012.

Respectfully submitted,

A handwritten signature in black ink that reads "John P. Wooldridge". The signature is written in a cursive style with a large initial "J" and a distinct "P".

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John P. Wooldridge  
Attorney for Applicant  
Registration No. 38,725

Dated: December 26, 2006



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Stefan Peter Hau-Riege

Docket No.: IL-11154

Serial No.: 10/783,520

Group Art Unit: 2877

Filed : February 20, 2004

Examiner: S. Nguyen

For : Method For Characterizing Mask Defects Using  
Image Reconstruction From X-Ray Diffraction Patterns

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Drawing Submission Cover Sheet**

Dear Sir:

Attached please find six sheets of formal drawings.

Respectfully submitted,

John P. Wooldridge  
Attorney for Applicant  
Registration No. 38,725

December 26, 2006